Preheat Retreat Asthma-Associated Proteins

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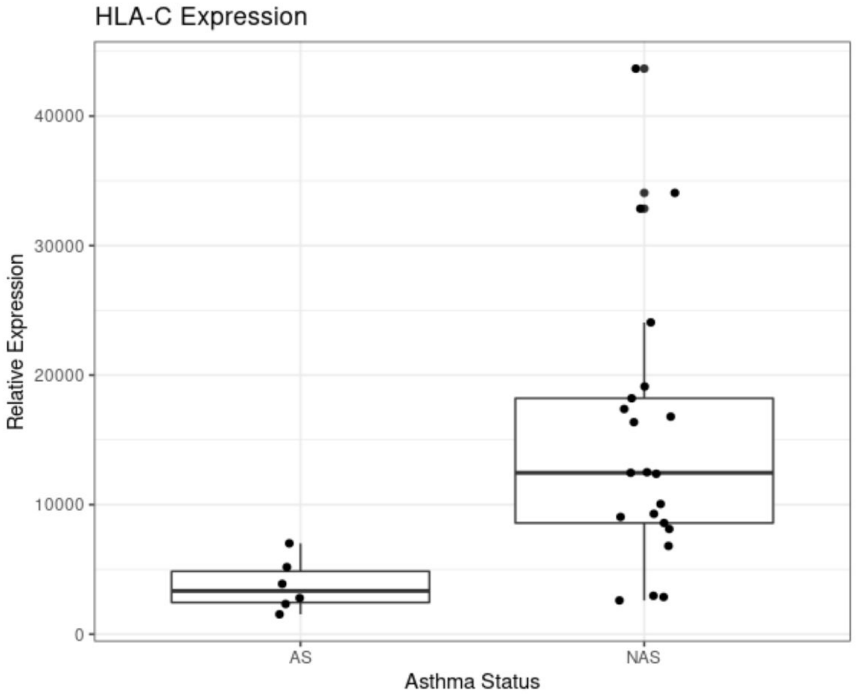
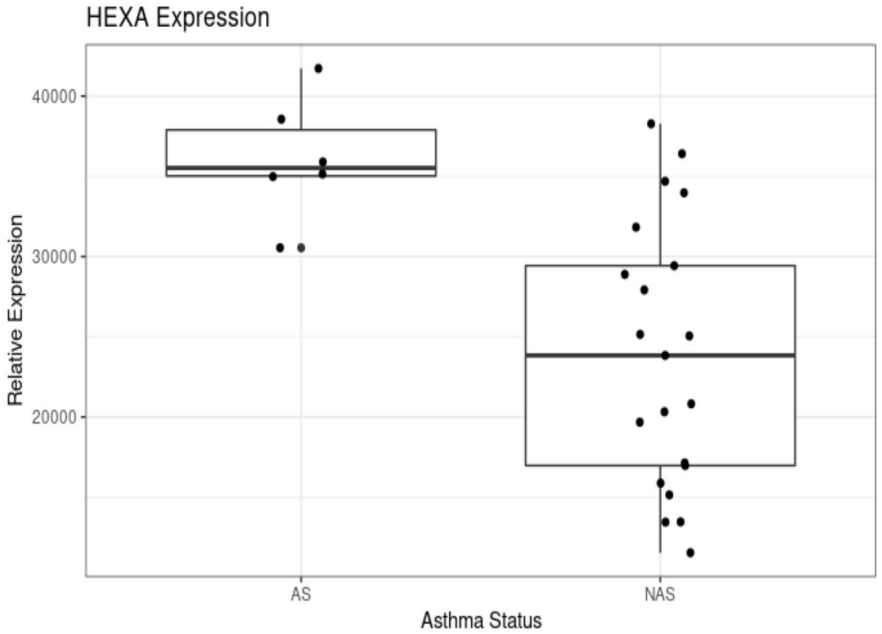
Asthma vs non-asthma pre-exposure

- t-test with no significant p-values between groups
- Most significant: HLA-C gene (Major Histocompatibility Complex, Class I, C)
  - pval.BH = 0.2676460
- Class I molecules play a central role in the immune system by presenting peptides derived from endoplasmic reticulum lumen.
- Specific HLA alleles variations found to have significant association with adult onset asthma



Asthma vs non-asthma post-exposure

- t-test with no significant p values between groups
- Most significant: HEXA Gene
  - pval.BH = 0.1059956
- HEXA Gene encodes a member of the glycosyl hydrolase 20 family of proteins
  - Specifically for the alpha subunit of the lysosomal enzyme beta-hexosaminidase
  - Mutations in this gene lead to neurodegenerative disorders
- Beta-hex could take part in airway inflammation and remodeling in asthma



Logistic Regression Results

- Accuracy = 0.45
- Sensitivity (true negatives/all negatives) = 0.5
- Specificity (true positives/all positives) = 0